

FINAL ENVIRONMENTAL ASSESSMENT

July 2008

PROPONENT: LHC Incorporated

SITE NAME: Tutvedt 3

LOCATION: E2NE4, Sec 9 and the W2NW4, Sec 10; T29N, R22W

COUNTY: Flathead

TYPE AND PURPOSE OF ACTION:

The proposed application is to permit a gravel extraction and crushing facility on a 153-acre parcel in the northwest portion of the Flathead Valley. The project site is located 7.5 miles northwest of Kalispell in the E2NE4, Section 9 and the W2NW4, Section 10, T29N, R22W, Flathead County, Montana. A map showing the location of the proposed mine site is presented as Area Location Map, Figure 1. The application is a 153-acre mining site including a 3-acre undisturbed area where a seasonal pond is present (see Site Map Figure 2). The majority of the material extracted and crushed onsite would be transported to the main LHC facility for processing, which is located approximately 3 miles south of the proposed mine site. The haulage route would be from West Valley Drive to Church Road to Stillwater Road. A minor amount of direct retail sales, roughly estimated at 5 to 10 percent of total product, would be transported to various other locations within the valley (Claridge 2008). The existing site is rolling, open agricultural land used for hay and small grain production with a small pond to the south. The operation would avoid the pond area and would disturb approximately 40 acres in the southwest corner with a maximum active mine area of 20 acres. Mining would continue to expand to the northeast over the 20-year life of the mine. The applicant would maintain the un-mined portions of the site as agricultural land and continue farming the land until the active mine area expands into it (Claridge 2008). The high water table occurs at an elevation of approximately 2,986 feet average mean sea level (amsl) as observed by LHC in the nearby pond and recorded using a survey-grade GPS. According to the Flathead County Conditional Use Permit (FCU06-17), the mine would have a permitted base of 2,996 feet amsl, which would provide a 10-foot protection buffer above the seasonal high water table (see Geologic Section Figure 3a and Geologic Section Location Map Figure 3b). Approximately 1.5 million cubic yards of material would be removed from the site. Upon completion, the site would be contoured to 3:1 slopes, re-soiled, and seeded to pasture grass. The applicant would return the land to agricultural production. Final reclamation would be completed by July 2027. The West Valley Land Use Committee reviewed and approved the zoning application on January 23, 2007. The Flathead County Board of Adjustment also granted approval of a one-year Conditional Use Permit FCU 06-17 for gravel extraction on February 6, 2007 (see Flathead County CUP Figure 4a) and granted a 6-month extension on February 1, 2008 (see Figure 4b). The site is in compliance with all of the necessary planning and zoning requirements.

This environmental assessment (EA) is required under the **Montana Environmental Policy Act (MEPA)**. An EA functions to identify, disclose and analyze the impacts of an action, in this case operating a gravel pit on which the state must make a decision, so that an informed decision can be made.

MEPA sets no environmental standards, even though it requires analysis of both the natural and human environment. This document may disclose many impacts that have no legislatively required mitigation measures or over which there is no regulatory authority. The state legislature has provided no authority in MEPA to allow the Department of Environmental Quality (DEQ) or any other state agency to require conditions or impose mitigations on a proposed permitting action that are not included in the permitting authority and operating standards in the governing state law, such as the Opencut Mining Act, the Clean Air Act of Montana, or any other applicable state environmental regulatory law. Beyond that, a company may agree to voluntarily modify its proposed activities or accept permit conditions.

The state law that regulates gravel-mining operations in Montana is the **Opencut Mining Act**. This law and its pursuant rules place operational guidance and limitations on a project during its life, and provide for the reclamation of land subjected to opencut materials mining. This law requires that a surety bond, cash deposit or other financial instrument be submitted to the state to cover the complete costs of reclaiming the site to its approved, post-mining land use if the permittee fails to reclaim the site as required by the law, the rules, and the permit.

The permit decision cannot be based upon the popularity of the project, but upon whether or not the proponent has met the requirements of the Opencut Mining Act, pursuant rules, and other laws pertaining to his proposed actions.

PUBLIC COMMENTS/QUESTIONS AND DEQ RESPONSES

Comments are combined and paraphrased below as necessary for efficiency and convenience.

Aesthetics

Public Comment/Question. The deterioration of aesthetics during the operation is not acceptable. There are already too many gravel sites in the valley.

DEQ Response. DEQ understands that an opencut operation can create a substantial visual impact. DEQ worked with the proponent to develop a plan to minimize the visual impact. See Section 8, **AESTHETICS** below.

Public Comment/Question. Noise is not desirable. Noise will be detrimental to the area and impacts must be adequately addressed and mitigated.

DEQ Response. DEQ agrees that noise is not desirable, especially in a rural setting. DEQ worked with the proponent to develop a plan to minimize the noise impact. See Section 8, **AESTHETICS** below.

Public Comment/Question. Night lighting is not desirable. Light will be detrimental to the area and impacts must be adequately addressed and mitigated.

DEQ Response. DEQ agrees that night lighting can have a negative effect on the surrounding residential areas. DEQ worked with the proponent to develop a plan to minimize the lighting impact. See Section 8, **AESTHETICS** below. Additionally, the county CUP requires that lighting be muted. See Paragraph 12 of the CUP (see Figure 4a) below.

Public Comment/Question. The visual berms will attract noxious weeds and become unsightly. Visual impacts must be adequately addressed and mitigated. We will still be able to see stockpiles of gravel and conveyors inside the 8 foot berms.

DEQ Response. The Plan of Operation requires berms to be built to deflect sound and light away from residences to the extent possible, and to somewhat improve aesthetics by blocking the view down into the pit area from adjacent residences and roadways. Soils must be planted immediately with grasses to prevent wind erosion and soil loss, and weeds must be controlled. The eight-foot berm requirement is based on the typical height of a passenger's eyes while driving by on a public roadway in a passenger vehicle, causing her/him to look slightly upward. They are not designed to block the view of all objects that may occur within the site. DEQ believes this is a reasonable attempt to reduce visual and audible impacts from the site.

Air Quality

Public Comment/Question. Dust is not desirable. Dust will be detrimental to the area and impacts must be adequately addressed and mitigated.

DEQ Response. DEQ worked with the proponent to develop a plan to minimize particulate matter (dust). See Section 3, **AIR QUALITY** below.

Neighborhood Plan

Public Comment/Question. This pit is in direct violation of the West Valley Neighborhood Plan. No further action should be taken on this permit until the court case has been settled.

DEQ Response. DEQ has no authority to delay processing the permit application until the court case is settled. DEQ must make a decision on the application as submitted and as approved by the Flathead County Planning & Zoning Office.

Employment

Public Comment/Question. This EA did not address the fact that this pit will create new, good-paying jobs for working class people well into the future. The site will also provide trucking firms with additional contracts.

DEQ Response. See Section 13, **QUANTITY AND DISTRIBUTION OF EMPLOYMENT** below.

Groundwater

Public Comment/Question. What impact will this operation have on the valley aquifers? Groundwater at this site flows toward a known well.

DEQ Response. See Section 2, **WATER QUALITY, QUANTITY AND DISTRIBUTION** below. Section 2 indicates that there will be no impact from the mine on water quality or quantity since there will be no water consumed from the site and there will be no water of any kind discharged. No bulk fuel, lubricants or chemicals will be stored on site. Because there is no manufacturing planned for this site, there are no liquids or other soluble products being used, and because mining will stay above the water table, there will be no impact of any kind on either the shallow or the deeper aquifer in this area.

The downgradient well, GWIC id #84538, is owned by BCD Land & Livestock and produces water from a shallow, perched aquifer, but will be unaffected by the gravel operation. See Figure 3b – Geologic Section Location Map.

Public Comment/Question. Describe the water source for the proposed operation, the water quality, and the quantity of water to be used. Address the effect of the proposed operation on shallow groundwater, deep groundwater, and well quality and quantity in the area.

DEQ Response. Water consumption for road and fugitive dust control would be approximately 17,500 gallons per day for approximately 100 days per year, trucked in from an offsite source (5 water trucks per day, 3,500 gallons per truck for 100 days per year, including days of rain) (Noble 2008). When the crusher is in operation, it would require about 4,000 gallons per day and would operate about 25 days per year. Total water consumption would be about 1,850,000 gallons per year (1,750,000 gallons for road dust and 100,000 for crusher dust). All water used would be for dust control and would be lost to evaporation.

Public Comment/Question. How does the water consumption of this gravel operation compare to water consumption for the existing farming operation, and will the net result be less than or greater than historic use?

DEQ Response. Currently, Tutvedt irrigates approximately 100 acres with a center pivot located on site, and he applies 35,000,000 gallons of water per year. That equals about 35,000 gallons per acre per year. The mine would remove approximately 20 acres of irrigable land, which would save approximately 700,000 gallons of water per year. The mining operation would use approximately 1,850,000 gallons per year for dust control and crushing, but all water would be trucked in. The net result of opening up this gravel pit at this tract of land would be a reduction of water consumed from the center pivot well but would result in a net water consumption increase of 1,150,000 gallons of water annually.

Aesthetics, Quality of Life, Zoning

Public Comment/Question. A long-term mining operation is not compatible with the community of the future. We don't need more gravel mines. Approving this application will deny nearby residents the right to use their property for its intended purposes, which we think include a home, safe from polluting and damaging impacts. The costs of doing this business (e.g., visual, noise, dust) will be paid by people not receiving any benefits. The operation should not be allowed. To allow mining operations to dot the valley is poor planning.

DEQ Response. Under the Opencut Mining Act, any party has the right to apply for an opencut permit on any site at any time, if the land is zoned such that this activity is allowable. The Act does not allow DEQ to limit the number of opencut operations in a given area or make permit decisions based on a perceived lack of "need" for additional operations, on who will and will not benefit from a proposed operation, on whether a proposed operation fits the character of an area, or on the popularity of a proposed operation. DEQ is required to evaluate a proposed opencut mining operation based on the requirements of the Act and rules. Mitigative measures may

be required to reduce certain on- and off-site impacts, and this has been done with this application. DEQ is obligated to issue an opencut permit to the applicant, if the application adequately addresses the requirements of the Act and rules. DEQ believes that potential off-site impacts of this operation would be reasonably mitigated within the limits provided by state law.

Issues raised with respect to: a) the stated lack of compatibility of a long-term mining operation with the local community, b) the proposed mining operation making the Flathead Valley a less desirable place to reside, c) allowing mining operations to dot the area is poor planning, and d) the perceived need for rezoning populated areas appropriately in Flathead County, are issues over which DEQ has no authority under the Act. These are issues that must be addressed at the local level, i.e., with Flathead County government. The county can prohibit sand and/or gravel mining in an area zoned as residential, and can impose reasonable conditions on an operation in all zones other than residential. Last year, the county issued a Conditional Use Permit (CUP) with 30 conditions on the proposed Tutvedt 3 operation (see Figure 4a). The Flathead County Planning & Zoning Office should be contacted about further or continuing planning and zoning issues.

Public Comment/Question. Flathead County has adopted the West Valley Neighborhood Plan as a legal zoning district. This new gravel pit will violate that Plan. Industrial use is permitted in light industrial and heavy industrial zoning only, and as a conditional use in other zoning districts, but not the West Valley Neighborhood Plan. The Supreme Court ruled that further study was a valid concern of local residents and that costs for a proper study were to be born by the applicant. The Extractive Industry classification of this permit is heavy industrial use not permitted in the legally adopted West Valley Neighborhood Plan.

DEQ Response. These are all issues that are outside of DEQ's authority and jurisdiction. They are the responsibility of Flathead County, which is the legally designated agency to administer zoning and land use planning matters in the county. Last year, Flathead County issued a Conditional Use Permit with 30 conditions on the proposed Tutvedt 3 operation (see Figure 4a). After this decision, the county issued a signed form to DEQ indicating that the proposed LHC Tutvedt 3 operation was in compliance with local zoning regulations. It appears that the commenter believes that the granting of the CUP by Flathead County on the proposed Tutvedt 3 operation is inconsistent with the West Valley Neighborhood Plan. The commenter would need to take this issue to Flathead County.

The reference to the Supreme Court is assumed to mean the Supreme Court ruling early this year on the CUP for the Tutvedt 2 operation. This ruling was specific to Tutvedt 2 and had no relationship to or effect on the Tutvedt 3 CUP.

Property Values

Public Comment/Question. A property value study documented losses of up to 56% because of the presence of a nearby asphalt plant. This permit would reduce our property values in the area.

DEQ Response. DEQ was not provided with any reference to the aforementioned "study" and was unable to find specific pertinent information upon which to evaluate this comment. Additionally, under the Opencut Mining Act, DEQ has no authority or jurisdiction over property value issues. The Montana Legislature has specifically limited DEQ's authority to issues relating to taxable value. The Legislature has given DEQ two means of mitigating the effects of gravel operations on adjacent property. Firstly, DEQ has authority to minimize noise and visual impacts to the degree practicable through use of berms, vegetation screens, and limits on hours of operation, and to otherwise prevent significant physical harm to adjacent land (See the Opencut Mining Act at 82-4-434(2)(o) and (p), MCA). Secondly, in order to protect and perpetuate the taxable value of property, land on which operations are completed must be graded and re-vegetated.

Further, no asphalt plant is planned at the present time for this location. A crushing facility is planned that would have the possibility of reducing the attractiveness of home sites to potential homebuyers seeking a quiet, rural/residential type of living environment. This operation could also affect the marketability of existing homes or lots, and therefore cause a reduction in the number of interested buyers and may reduce the number of offers on properties for sale. This reduction in property turnover should not have any long-term effect on taxable value of property. If homeowners believe their property values are decreased because of a gravel operation, they may appeal to the County and the State for tax adjustment.

In 1998, the State contracted for a study to determine whether the existence of a gravel pit and gravel operation impacts the value of surrounding real property. The study is entitled: "Gravel Pits: The Effect on Neighborhood Property Values," by Phillip J. Rygg, MAI, Appraisal Research Group, Kalispell, Montana, February 1998. Rygg's study involved residential property near two gravel operations in the Flathead Valley. He concluded that these measures were effective in preventing decrease in taxable value of those lands surrounding the gravel pits. In his review of the study, Jim Fairbanks, Region 3 Manager of the Montana Department of

Revenue, Property Assessment Division reported: "In the course of responding to valuation challenges of ad valorem tax appraisals, your reviewer has encountered similar arguments from Missoula County taxpayers regarding the presumed negative influence of gravel pits, BPA power lines, neighborhood character change, and traffic and other nuisances. In virtually ALL cases, negative value impacts were not measurable. Potential purchasers accept newly created minor nuisances that long-time residents consider value diminishing."

Roads and Traffic

Public Comment/Question. Your evaluation of traffic impacts is wrong. Closure of the Tutvedt 2 gravel pit along Farm to Market Road has resulted in a perceptible decrease in truck traffic. We think Church Drive and Stillwater Roads between these two LHC sites will have similar truck traffic impacts. There was a fatal traffic accident on Stillwater Drive last year.

DEQ Response. See Section 11, **HUMAN HEALTH AND SAFETY** below. DEQ agrees that there will be additional traffic on some segments of Church Drive and Stillwater Road connecting these two LHC pits, but DEQ maintains that even though individual trucks have greater weight and they are more identifiable than smaller passenger vehicles, the amount of traffic and impacts will be small in comparison to existing traffic numbers.

The fatality on Stillwater Drive in 2007 was reported as a forklift driver who was ferrying a piece of equipment to a construction site and lost control of his equipment. This was not a normal vehicular traffic accident, and it was not related to gravel mining or gravel product transportation.

Wildlife

Public Comment/Question. You list habitats and unknown numbers of grizzly bears, lynx, gray wolf, bull trout, black tern, fisher and marten as existing in the area, but say that displacement of these species and habitats would be minimal. Displacement is a permanent impact.

DEQ Response. See Sections 5, **TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS** and 6, **UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES** below. Habitats and populations of these species are reported for the geographic area surrounding the proposed mine site by the Natural Heritage Program. Often the numbers are only representative of the general area and are not conclusive for a finite location. For example, the bull trout was listed, but trout do not exist at this site because there is no suitable habitat, i.e., flowing water. There have been no observed bull trout or grizzly bears here. However, the area is listed as having suitable habitat within a mile of the site. The bull trout were probably shown due to the location of the Stillwater River, located a mile to the east. Much of the desirable wildlife habitat is likely associated with the pond south of this site and the Stillwater River, which will remain undisturbed.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE AND EXAMPLE/GUIDANCE QUESTIONS	POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE:	<p>The proposed mine site is located on the eastern terminus of the Lost Creek Alluvial Fan. The fan consists of a relatively thick accumulation of outwash material that was deposited by glacial melt water flowing outward from the mouth of Lost Creek at the western margin of the Flathead Valley. Outwash deposits are primarily composed of sand and gravel that can be up to 140 feet thick.</p> <p>The majority of the site is overlain by soils of the Tally series (Tc). This series consists of sandy soils over loose sand (USDA, 1960). Soils of the Tally series have a dark brown, moderately sandy surface soil about 10 inches thick. The subsoil is brown and merges gradually with loose sand strata at depths of</p>

	<p>15 to 30 inches. The soils readily adsorb moisture and permeability is rapid.</p> <p>Soil test pits excavated on the property confirmed the average topsoil and overburden depths in the permit area are 10 inches and 12 inches, respectively. The topsoil and overburden would be salvaged and used to construct berms. Following mining activities, the soils would be replaced, disked and seeded to grass. There are no fragile, compactable, or unstable soils present and no unusual geologic features or special reclamation considerations.</p>
<p>2. WATER QUALITY, QUANTITY AND DISTRIBUTION:</p>	<p>There are two aquifers present in this part of the valley: (1) a shallow, perched aquifer, and (2) the deep, artesian aquifer (see Figure 3a – Geologic Section). The shallow, perched aquifer represents the eastern extent of the Lost Creek Alluvial Fan. The seasonal high water table occurs at an elevation of approximately 2986 feet amsl as observed by LHC in the nearby pond and recorded using a survey-grade GPS. The mine would have a permitted base floor of 2996 feet amsl, which would provide a 10-foot protection buffer above the seasonal high water table as required by the final approved conditions contained in Conditional Use Permit (CUP) FCU-06-17.</p> <p>DEQ has conducted a groundwater investigation of the Lost Creek Alluvial Fan to determine the source of the elevated nitrate concentrations within the aquifer. DEQ collected water-quality samples from 31 shallow wells in 2006. The sample results indicated the average nitrate level was 9.44 mg/L, with at least 10 wells exceeding the DEQ-7 water quality standard of 10 mg/L. Recently published reports (Alvey, February 2007 and Tetra Tech, March 2008) concluded that the nitrate contamination is primarily confined to the shallow aquifer, and there are likely multiple sources contributing to the elevated nitrate concentrations. Various sources cited include: individual septic systems, fertilizer application, dairy waste, and feedlot waste, and are not related to gravel extraction. Gravel extraction at the Tutvedt 3 site would not pose a risk to the shallow aquifer with regard to nitrate contamination.</p> <p>The groundwater flow direction in the shallow aquifer is to the southeast (Konizeski, 1968). A review of well logs in the area indicates there is only one well (GWIC id #84538) that would be considered a potential downgradient receptor. The well is located a quarter mile southeast of the proposed site and was completed for domestic use by perforating the casing at the bottom of the well in the shallow aquifer at a depth between 98 and 100 feet below the ground surface. The well was not drilled deep enough to intercept the deeper aquifer. It produces 30 GPM with a static water level of 70 feet. Well driller's logs indicate the shallow, perched aquifer is underlain by a layer of glacial till that is approximately 150 feet thick. The glacial till represents the confining layer that separates the deep, artesian aquifer from the perched aquifer. The till is composed of silty-clay sediments that inhibit the downward migration of contaminants. The deep aquifer would therefore not be affected by mining and crushing operations.</p> <p>A small, seasonal pond is present on the south side of the permit boundary. An Erosion Control Plan specifying the type of best management practices (BMPs) that will be implemented is provided on Figure 5 – Erosion Control Plan. The BMPs include silt fences along the margin of the soil stockpile and the drainage swales flowing into the pond. These BMPs would minimize sediment from flowing into the pond area.</p> <p>There is no intent to operate an asphalt batch plant or have petroleum storage tanks on site. Vehicles and equipment would be fueled on a daily basis by a fuel service truck. Any over-spill would be contained and removed in a lawful</p>

	<p>manner.</p> <p>Adhering to the previously described BMPs and mitigation methods would minimize the potential for water-quality impacts.</p>
3. AIR QUALITY:	<p>Air quality impacts would be minimal to nonexistent. Although heavy equipment and truck traffic create dusty conditions, the CUP requires that "...dust abatement be performed consistently and conscientiously to limit any impacts to the surrounding properties and general air quality. All operations would stop when any airborne dust generated by the extraction operation leaves the property; operations may resume only upon control of fugitive dust." All topsoil and overburden berms would be vegetated to prevent dust generation. In addition, West Valley Road from the mine entrance to the intersection of Church Drive, approximately 3,200 feet, would be constructed and paved to Flathead County road standards. The site is not within a Class I airshed.</p>
4. VEGETATION COVER, QUANTITY AND QUALITY:	<p>There are no known rare or sensitive plants or cover types present in the site area. The existing vegetation consists of dryland farming of small grain crops such as wheat and barely. The field would be taken out of crop production as mining proceeds. Upon completion of mining in a particular area, disturbed areas would be re-soiled and planted with either native or pasture grasses compatible with the proposed reclaimed use. An Invasive Plant Management Plan (i.e. Weed Plan) has been obtained from the Flathead County Weed and Parks Department that specifies revegetation and weed control practices.</p>
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS:	<p>The land has been cultivated for small grain production and provides very limited habitat. Occasional deer, rodents, song birds, coyotes, raptors, and other animal species may frequent the site. Population numbers for these species are not known. These animals would be displaced on a small scale as mining progresses, but some would re-inhabit the area as reclamation follows behind mining. Permanent impacts on wildlife are considered to be minimal.</p>
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES:	<p>The Montana Natural Heritage Program has listed species of concern in this general area including the gray wolf, bull trout, black tern, fisher, Canada lynx, marten, wolverine and grizzly bear. No specific observations of these animals were reported at the project site. Site inspections have not revealed any endangered or threatened plant or animal species that would be directly affected. The area primarily on the south side of the seasonal pond is identified in the National Wetland Inventory as Palustrine wetlands. The pond and riparian wetland would not be disturbed and water quality would be protected using BMPs as described above in Section 2.</p>
7. HISTORICAL AND ARCHAEOLOGICAL SITES:	<p>There are no known historical or archeological sites within the proposed mine area, and the State Historic Preservation Office believes a cultural resource inventory of the site is not warranted at this time. Most of the site has been previously disturbed by modern man by mining, logging and farming, thus altering the integrity of resources that may have existed. A surface reconnaissance did not discover any cultural, historical or archeological resources. The operator would give appropriate protection to any values or artifacts discovered in the affected area. If significant resources are found, the operation would be routed around the site of discovery for a reasonable time until salvage could be conducted. The State Historic Preservation Office would be promptly notified.</p>
8. AESTHETICS:	<p>The site is located in an area of rolling agricultural land used to raise crops such as mint, wheat, barley, and alfalfa; two dairies are also present in this area. The land to the southwest has recently been developed as 5- to 10-acre rural-residential parcels. The mine site would initially be visible, but become less so as mining proceeds. The CUP requires that 8-foot high berms be constructed on the southwest and northwest boundaries of the mine site to</p>

	<p>reduce noise and visual impacts. The berms would be landscaped with foliage of sufficient maturity and quantity to provide meaningful auditory and visual screening. The CUP also specifies that a 200-foot undisturbed buffer be maintained on the southwest and northwest boundaries of the mines to minimize potential impacts to the residential developments. Upon completion, reclamation would return the area to a visually acceptable landscape. This project is considered to be long-term (i.e. 20 years to complete).</p> <p>Hours of operation would be 7:00 a.m. to 7:00 p.m. Monday through Friday and 8:00 a.m. to 2:00 p.m. on Saturdays with no crushing allowed on Saturdays.</p> <p>Any light used for this operation would be directed in such a way as to be contained within the boundaries of the property and shall be hooded or directed in a manner that would not be detrimental to the adjoining property owners. Lights would be extinguished at the close of business each day, with the exception of limited security lighting.</p> <p>Noise levels generated by crushers, dozers, loaders and truck traffic hauling to off-site projects at the pit are generally within the range of 60 to 90 decibels measured on-site, decreasing with distance. As a comparison, sound levels for ordinary activities such as close conversation at 60 decibels and music from a radio at 70 decibels are considered to be moderate. Levels above 90 decibels lasting 8 hours or more are severe, and prolonged exposure to employees on site without hearing protection could lead to hearing loss.</p> <p>Noise decreases with distance. A crusher noise level of 85 decibels measured at 50 feet reduces to 79 decibels at 100 feet, 72 decibels at 200 feet and 65 decibels at 400 feet. Thus, the noise level would be reduced to moderate levels at the permit boundary and would continue to decline. Noise is not cumulative. A truck operating at 65 decibels and a loader at 75 decibels do not add up to the equivalent of a 140-decibel jet plane at takeoff.</p> <p>A Class III Landfill site is located adjacent to the southeast corner of the mine area. Class III Landfills primarily receive hazardous waste generated either onsite or by offsite sources that are owned, controlled, or operated by the facility owner or operator. This landfill site is used for disposal of wood chips, sawdust and concrete. Mine operations would not interfere with use of the landfill.</p>
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY:	There are no unusual demands on land, water, air or energy anticipated as a result of this project.
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES:	There are no other environmental concerns or future plans for this tract that would be associated with this operation.

IMPACTS ON THE HUMAN POPULATION	
RESOURCE	POTENTIAL IMPACTS AND MITIGATION MEASURES
11. HUMAN HEALTH AND SAFETY:	Heavy equipment such as crushers, trucks and loaders create operational hazards, but the operator must comply with all MSHA and OSHA regulations. Most of these hazards are associated with operations in the pit; because public access is restricted, the general public would not be exposed to operations. The operator must employ proper precautions to avoid accidents.

	<p>Traffic</p> <p>Over the past several years, the Montana Department of Transportation (MDT) has conducted traffic counts and systems impacts studies in the vicinity of the proposed opencut operation to determine existing traffic flows and possible impacts from planned developments. These continuing efforts provide a factual basis for road or traffic control improvements. Average daily traffic (ADT) is calculated so that numbers can be compared to data developed by the MDT, the Flathead County Planning Board, or traffic consultants.</p> <p>Trucks must follow the same rules of the road as other traffic. Speed limits, signage, and other traffic control devices are designed to protect humans. For example, the springtime truck speed limit is reduced to 35 mph on Farm To Market Road due to road breakup. The MDT traffic studies, in conjunction with the local government planning efforts, would be used to determine if speed limits should be reduced, warning signs or traffic signals should be installed, or other actions should be taken to control or reroute traffic.</p> <p>The Conditional Use Permit (CUP) for the Tutvedt 3 site places three traffic conditions on this permit:</p> <ul style="list-style-type: none"> • The applicant shall build and pave to county standards West Valley Drive from its intersection with Church Drive to the site entrance, approximately 3,200 feet. Paving shall be completed prior to commencement of any onsite operations. • A stop sign shall be installed at the site's access onto West Valley Drive. • The applicant shall build and pave to county standards 100 feet of Stillwater Road, commencing from the end of the existing pavement south. <p>The Tutvedt 3 application indicates that approximately 1,500,000 cubic yards of materials would be mined over 20 years, or about 75,000 cubic yards per year. Traffic that might be generated due to this operation can be calculated as follows: The average daily traffic (ADT) is computed by dividing the total volume of product proposed to be mined (1,500,000 cubic yards) by the estimated volume per truckload (20 cubic yards). This number of loaded-truck trips is multiplied by 2 to account for empty trucks returning to the site. Then, dividing the total truck trips by the 20-year life of operation and by 286 working days per year (5.5 days per week) results in <u>26 ADT</u> (1,500,000 yds³/20 yds³/truck x 2 trips /20 years /286 days).</p> <p>Specific traffic counts for Stillwater Road and Church Drive are unavailable, because they are not state highways. Therefore, impacts of this additional traffic on those two roads are unknown. Much of the material would be transported to the main LHC facility on Stillwater Road. That volume (e.g. 10% of 75,000 or 7,500 cubic yards per year) could go south onto West Reserve, which could add an average of 1 or 2 trucks per day to the traffic on West Reserve. Traffic on West Reserve is projected by MDT to increase to over 11,000 ADT (52.1 percent) due to the new high school and a subdivision along West Reserve. Therefore, the additional traffic added to West Reserve by this proposed operation would be negligible.</p>
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION:	Approximately 130 acres of land would be altered from agricultural use and changed to industrial/commercial use. Upon completion of mining, the land would be reclaimed and returned to agricultural and/or residential use.
13. QUANTITY AND DISTRIBUTION OF	The gravel resource at LHC's existing pit is nearing depletion and the Tutvedt

EMPLOYMENT:	3 pit would serve as a replacement source. Therefore, current employees would be relocated and utilized, in the main, for this operation. This project would not likely create a significant number of new jobs, but could provide longer term, steady employment for those already working.
14. LOCAL AND STATE TAX BASE AND TAX REVENUES:	Additional revenues would be generated for Flathead County and the State in the form of taxes by: (1) reclassification of the land from agricultural to industrial use; (2) fuel taxes associated with hauling gravel; and (3) equipment taxes.
15. DEMAND FOR GOVERNMENT SERVICES:	The operation would require periodic site inspections by DEQ staff until such time as the site is completely reclaimed to the required post-mining use. These inspections would usually be performed in conjunction with other area operations.
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS:	As discussed in the preface of this EA entitled Type and Purpose of Action, the West Valley Land Use Committee reviewed and approved the zoning application on January 23, 2007. The Flathead County Board of Adjustment granted approval of a one-year Conditional Use Permit FCU 06-17 for gravel extraction on February 6, 2007 (see Flathead County CUP Figure 4a) and granted a 6-month extension on February 1, 2008 (see Figure 4b). The site is in compliance with all of the necessary planning and zoning requirements.
17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES:	There is no wilderness or recreational area adjacent to, nearby or accessed through this tract. All adjacent lands are private property. Therefore, this project would not have an effect on recreational or wilderness activities. There is no recreational potential associated with this tract as it is farmland.
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING:	The project would not add to the population or require additional housing for the reasons discussed under Section 13 above.
19. SOCIAL STRUCTURES AND MORES:	The area is primarily agricultural with minor rural-residential uses in the immediate area. The traditional land use has been agricultural associated with crop and dairy production. However, the area is also underlain by a high quality deposit of sand and gravel.
20. CULTURAL UNIQUENESS AND DIVERSITY:	This area is gradually shifting from agricultural to residential and industrial uses. This is a common transition in the valley associated with the current level of development the valley is experiencing.
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	None known.

Alternatives Considered:

A. Denial: The pit would not be permitted and the owner of the gravel resource would be denied full utilization of his property at this time. However, another application could be submitted to revise the existing plan, or an application could be submitted for another site.

B. Approval of the application with significant associated conditions: The Plan of Operation and the Conditional Use Permit (FCU-06-07) have been written with significant conditions including: (1) limited hours of operation; (2) construction of visual and noise reduction berms; (3) establishment of a 200-foot buffer on the southwest and northwest boundaries of the mine; (4) prevention of fugitive dust emissions through paving of 3,200 feet of West Valley Road; (5) water quality protection by implementing a number of BMPs; (6) soil salvage and full reclamation through an approved Flathead County revegetation and weed management plan.

Public Involvement, Agencies, Groups, or Individuals contacted:

Flathead County Planning and Zoning. The DRAFT Environmental Assessment was advertised in the Daily Inter Lake newspaper requesting public comment. Comments were accepted through Friday, June 20, 2008. There were 16 comments received, some of which cited perceived benefits of the proposed site such as improved employment, increased taxes and local availability of aggregate products, and some of which cited perceived negative impacts involving dust, noise, traffic, water quality, property values, aesthetics, wildlife and the issues with zoning and conflicts with the Neighborhood Plan.

Other Governmental Agencies with Jurisdiction, List of Permits Needed:

Mine Safety and Health Administration for safety permit; DEQ for Air Quality Permit.

Magnitude and Significance of Potential Impacts:

Impacts on the general environment would not be significant because of the scope and location of the project, the lack of significant or threatened wildlife or habitat, and because of the mitigation measures placed in the Plan of Operation and the County Conditional Use Permit.

Regulatory Impact on Private Property:

The analysis conducted in response to the Private Property Assessment Act (PPAA) indicates no impact is expected on the use of private property. The Department does not plan to deny the application or impose conditions that would restrict the use of private property so as to constitute a taking. See attachment for PPAA checklist assessment.

References cited:

Alvey, Laura. February 2007. Report of Findings for the Lost Creek Fan Nitrate Investigation August-September 2006. Groundwater Remediation Program/Site Response Section/Remediation Division. Department of Environmental Quality.

Claridge, Jeff. March 2008. Personal communication during a meeting on March 25, 2008 at the DEQ office in Kalispell.

Flathead County Planning and Zoning. February 2007. Addendum to Conditional Use Permit Report #FCU-06-07, Paul and Sharon Tutvedt Family LTD Partnership, February 8, 2007, Final Approved Conditions.

LaFave, John I., Larry N. Smith, and Thomas W. Patton. 2004. Ground-Water Resources of the Flathead Lake Area: Flathead, Lake, Missoula, and Sanders Counties, Montana, Montana Ground-Water Assessment Atlas 2.

Montana Bureau of Mines and Geology. 2007. Groundwater Information Center Report for Well Records in Sections 3, 4, 9 and 10 of Township 29 North, Range 22 West, Flathead County.

Noble, Roger. June 2008. Email message to Rod Samdahl on 06/25/08.

Raisch, R.W. and R.K. Jeffry. 1988. PM-10 Chemical Mass Balance Study for Kalispell, Montana. Air Quality Bureau, Department of Health and Environmental Sciences, Helena, Montana.

Smith, Larry N. 2004. Surficial Geologic Map of the upper Flathead River valley (Kalispell valley) Area, Flathead County, Northwest Montana. Montana Bureau of Mines and Geology Ground-Water Assessment Atlas No. 2, Part B, Map 6.

Tetra Tech. 2008. Lost Creek Fan Shallow Aquifer Potentiometric Surface Mapping Report Northwest of Kalispell, Montana. Tetra Tech Project No. 8570003, March 4, 2008.

U. S. Department of Agriculture. September 1960. Soil Survey of the Upper Flathead Valley Area, Montana, Soil Conservation Service, Series 1946, No. 4, 67pp.

RECOMMENDATION FOR FURTHER ENVIRONMENTAL ANALYSIS:

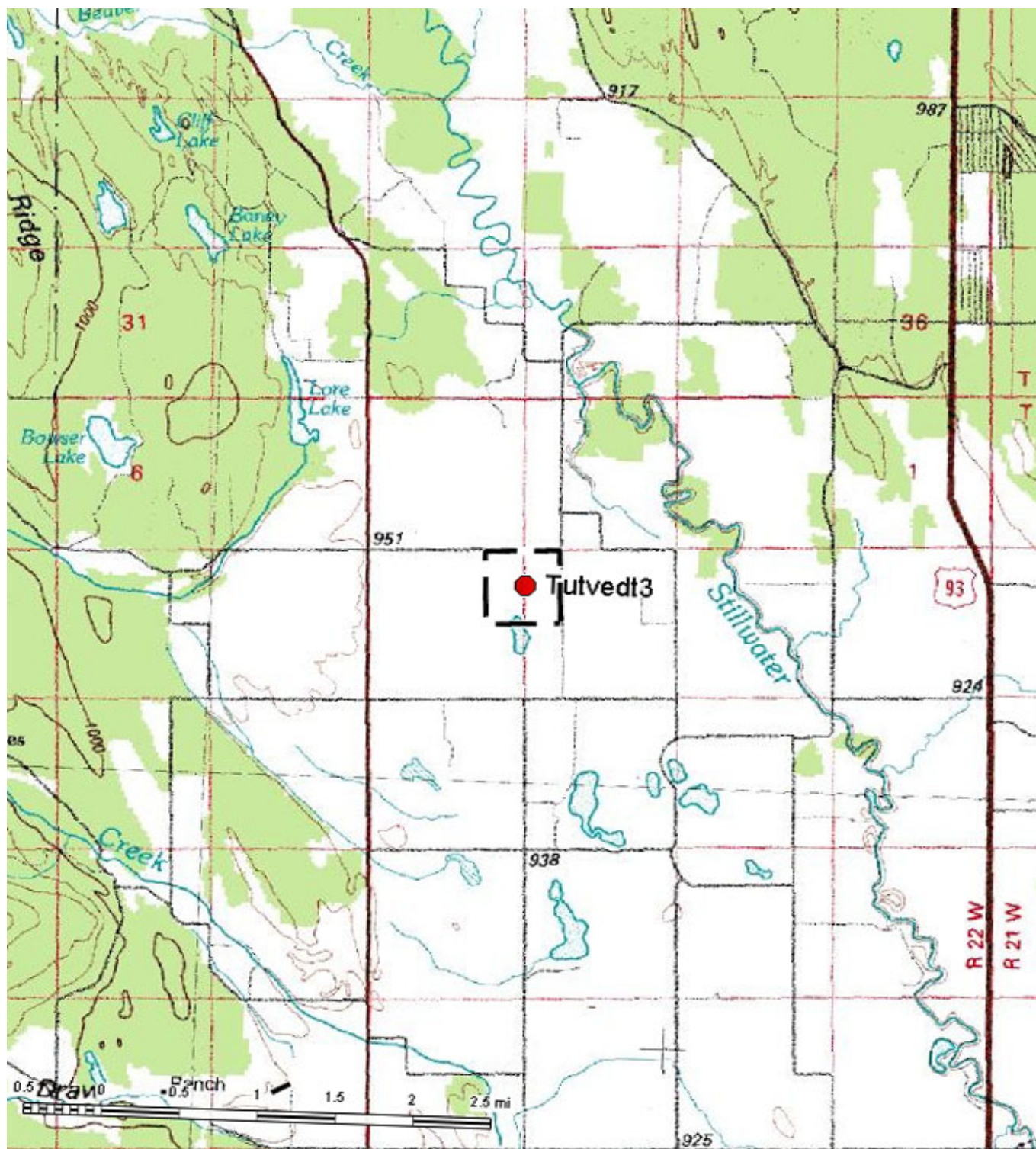
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☐ MORE DETAILED EA

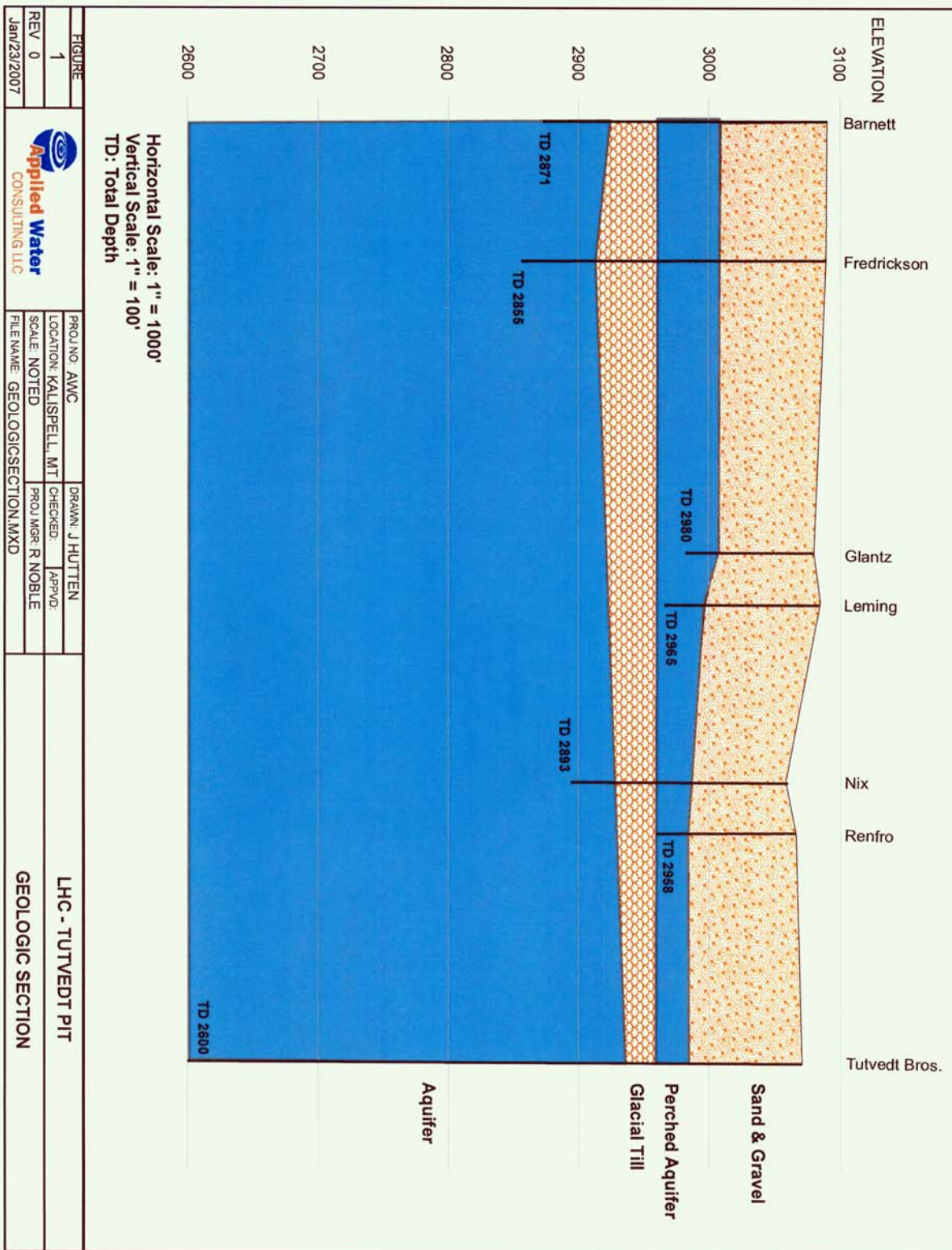
☒ NO FURTHER ANALYSIS

INDIVIDUALS OR GROUPS CONTRIBUTING TO THIS EA: _____

Written by: Rod Samdahl, Reclamation Specialist, Opencut Mining Program







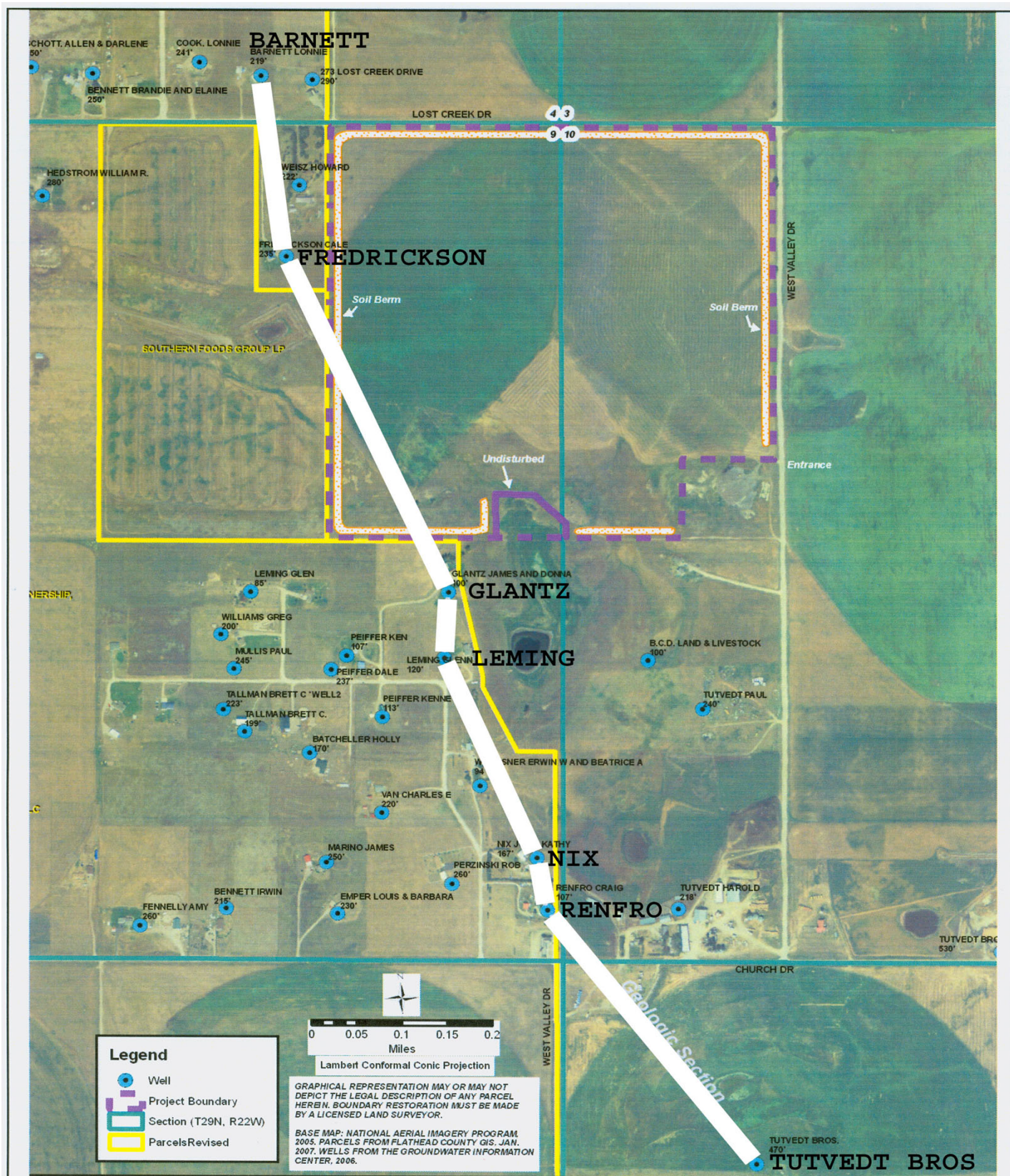



FIGURE	 Applied Water CONSULTING LLC	PROJ NO: AWC	DRAWN: J. HUTTEN		LHC - TUTVEDT PIT MAP OF SURROUNDING GROUNDWATER WELLS
1		LOCATION: KALISPELL MT	CHECKED:	APPVD:	
REV 1		SCALE: NOTED	PROJ MGR: R. NOBLE		
August/23/2007		FILE NAME: OWNERSHIPANDWELLS3600.MXD			

Figure 4a – Flathead County CUP

**CONDITIONAL USE PERMIT
PAUL & SHARON TUTVEDT FAMILY LTD PARTNERSHIP STAFF REPORT #FCU 06-17
February 6, 2007**

1. Development and operation of the facility shall be performed in compliance with the information presented and approved except as otherwise modified by these conditions.
2. Any change or modification to the use not specified in the application may not be effected unless specifically approved in writing either by the Flathead County Planning and Zoning Office or the Flathead County Board of Adjustment.
3. If the permittee fails to implement the use of the property as allowed by this permit within one year from the date of issuance, this permit shall expire one year from the date of issuance.
4. Conditional Use Permit FCU-06-17 is valid for 20 years from the date of issuance and runs with the property. Should the property be sold during this time, and if the new owner wishes to continue the use of the property, said use shall remain in compliance with all terms of this conditional use permit and be commenced within one year of transfer of ownership.
5. Conditional Use Permit FCU-06-17 will undergo administrative review at five year intervals from the date of issuance to ensure compliance with conditions.
6. Hours of operation shall be 7:00 AM to 7:00 PM, Monday through Friday and 8 a.m. to 2 p.m. Saturdays. No crushing is allowed on Saturdays.
7. The operator shall maintain a mining floor of no deeper than 2,996 feet in elevation.
8. All parking areas for employee vehicles and company vehicles shall be provided onsite.
9. Fencing shall be maintained around the subject properties. Livestock shall not be permitted within 75 feet of the active pit, staging and stockpiling areas at any time. Livestock-secure perimeter fencing shall be placed around the area.
10. Dust abatement shall be performed consistently and conscientiously to limit any impacts to the surrounding properties and general air quality.
11. The applicant will employ all commercially reasonable means to minimize noise generated by operations. This includes, but is not limited to, mufflers or sound dampening devices on all generators to reduce noise impacts.
12. Any light used for the operation shall be directed in such a way as to be contained within the boundaries of the property and shall be hooded, screened or directed in a manner that it shall not be detrimental to the adjoining property owners or the neighborhood. Lights shall be extinguished at the close of business each day, with the exception of limited security lighting.
13. Pockets and stagnant pools of water resulting from surface drainage shall be treated with EPA-approved larvicides to eliminate breeding places for mosquitoes and other insects. Method and chemical uses shall be approved by the Montana

Department of Agriculture; or the ponds shall be periodically drained to prevent the creation of such breeding places. Any larvicides used shall be environmentally safe and pose no threat to water quality.

14. The applicant/operator shall maintain a 200-foot undisturbed buffer area in the southwest and northwest corners of the subject property to minimize impacts to residential development. These buffer areas are defined as follows: 200 feet north from the southern property line, running from the western property line east to the landfill boundary and 200 feet east from the western property line, running from the northern property line south to a termination 100 feet south of Tract 4ABC in Section 9, Township 29N, Range 22W, PMM. Landscape buffers may be modified or eliminated with the consent of the adjacent residential neighbors.

15. Landscape buffers shall be planted along parcel boundaries with neighboring residential development. Landscape material shall be of sufficient maturity and quantity to provide meaningful auditory and visual screening. Landscape buffers may be modified or eliminated with the consent of the adjacent residential neighbors.

16. Soils stockpiled on site shall be bermed to a minimum of eight feet. Berms shall be maintained to reduce noise and visual impact of operations to the southwest and northwest of the subject property to limit impacts on neighboring residential properties. Berming and landscaping may be placed in the 200-foot undisturbed buffer areas defined in Condition 14. Berming and landscaping shall be constructed prior to commencement of operations, excluding those operations necessary for site preparation. Landscape buffers may be modified or eliminated with the consent of the adjacent residential neighbors.

17. Topsoil and overburden berms shall be revegetated in accordance with a plan approved by the County Weed and Parks Department. A signed Invasive Plant Management Form shall be obtained from the County Weed and Parks Department and submitted to Flathead County Planning and Zoning.

18. The applicant shall build and pave to county standards West Valley Drive from its intersection with Church Drive to the site entrance, approximately 3,200 feet. Paving shall be completed prior to commencement of any onsite operations.

19. A stop sign shall be installed at the site's access onto West Valley Drive.

20. The applicant shall build and pave to county standards 100 feet of Stillwater Road, commencing from the end of the existing pavement south.

21. The applicant shall obtain a letter from the West Valley Rural Fire Department stating all access, parking, fire suppression, and emergency evacuation plans are acceptable for the purpose of protecting public health and safety.

22. The applicant shall obtain and furnish proof of an approach permit from the Flathead County Road and Bridge Department for commercial access onto West Valley Drive.

23. A Plan of Operations shall be signed and approved by the owner or operator and the Montana Department of Environmental Quality, with a copy submitted to Flathead County Planning and Zoning within five working days of receipt.

24. No more than 40 total disturbed acres, not including roads, are permitted at any time. The total 40 acre project area shall be indicated on a map and submitted to Flathead County Planning and Zoning. Active pit area shall not exceed 20 acres at any time; staging area shall not be classified as pit area.

25. Ten acres of the 40 must be under reclamation (including grading, ripping, and reseeding) to expand into the next 10 acre excavation area. Flathead County Planning and Zoning staff will review the site plan for reclamation upon notification of expansion.

26. The applicant shall not store unleaded gas, diesel fuel, or any hazardous materials onsite.

27. This operation is limited to extraction, stockpiling, crushing, and screening of material onsite.

28. Asphalt and concrete batch plant operations are prohibited.

29. Written documentation requested in Conditions 17, 21, 22, 23, and 24 shall be furnished to Flathead County Planning and Zoning prior to commencement of operations.

30. Both the landowner and operator of the mining operation shall comply with the Montana Opencut Mining Act, as administered by the Montana Department of Environmental Quality. The conditions of this permit shall be in addition to the

MAY-22-2008 THU 02:16 PM LHC INC

FAX NO. 4067586430

P. 02

Flathead County Planning & Zoning Office

Earl Bennett Building
1035 First Avenue West
Kalispell, Montana 59901

Phone: (406) 751-8200
Fax: (406) 751-8210

February 01, 2008

Paul & Sharon Tutvedt Family, LTD Partnerships
3060 West Valley Drive
Kalispell, MT 59901

RE: Conditional Use Permit FCU-06-17

Dear Paul & Sharon:

Thank you for your letter of January 21, requesting an additional six-month extension to Conditional Use Permit FCU-06-21 (copy appended), granted February 06, 2007. This office recognizes that the Department of Environmental Quality has a significant backlog for permit processing.

By keeping us informed regarding the permitting process, the applicant has demonstrated good faith as required under Section 2.06.060(2)(B), which reads:

2.06.060 Termination and Transferability

Once granted the Conditional Use Permit, with its terms and conditions, shall:

- (2) Terminate 12 months from the date of authorization if commencement of authorized activity has not begun;
- (B) Unless the applicant can demonstrate and maintain a continuous effort in good faith (preparing financing, securing state or federal permits, undertaking engineering and design, etc.) in commencing the activity.

The permit expiration date is now August 06, 2008.

Sincerely,



Jeff Harris, Director
Flathead County Planning and Zoning

RECEIVED

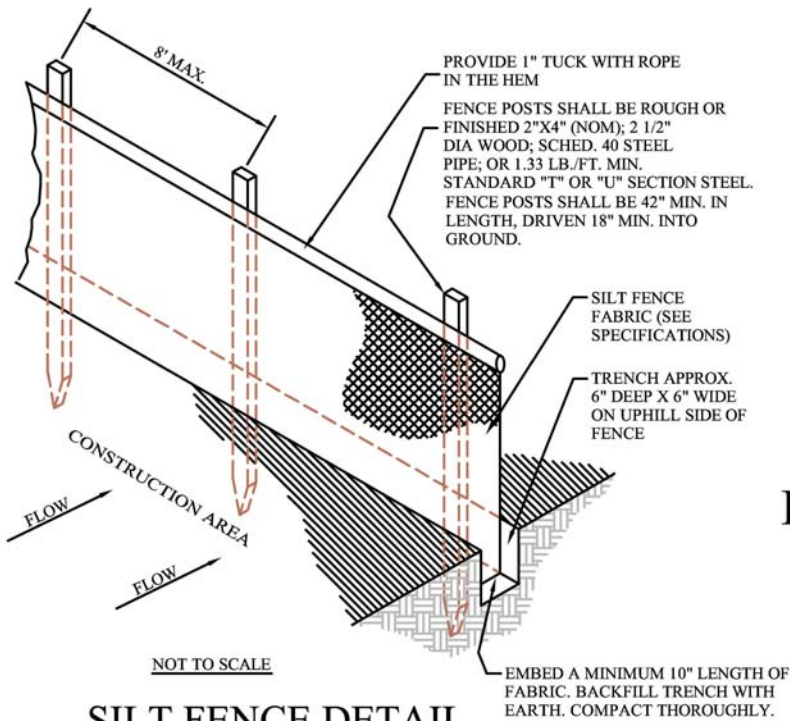
MAY 21 2008

Department of
Environmental Quality
Kalispell Regional Office

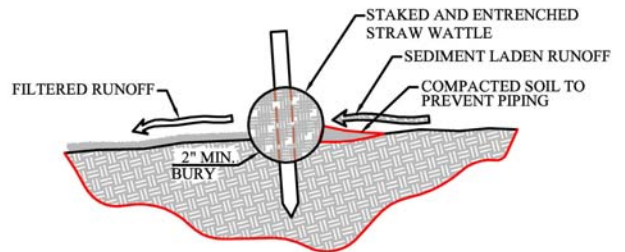
encl: Approval letter FCU-06-17, Flathead County Board of Adjustment, 02/09/07
cc: Hammer Hewitt, Jacobs & Floch PLLC
Jeff Claridge, LHC

file: L:\Users\AP\Files\FCPZ\FCU PERMITS\FCU\2007\FCU Extensions\FCU-06-17 Tutvedt extension 02-01-08.doc

date: 2/5/2008



SILT FENCE DETAIL
NOT TO SCALE



STRAW WATTLE DETAIL
NOT TO SCALE

Erosion Control Best Management Practices



PO BOX 7667
KALISPELL, MT 59904
(406) 756-2550

Applied Water
CONSULTING LLC

NOTES

1. SILT FENCE FABRIC TO BE FASTENED SECURELY TO STEEL FENCE POST BY USE OF WIRE TIES OR HOG RINGS. (3 FASTENERS PER POST), FOR WOODEN POSTS, FASTENERS SHALL BE NO. 17 GAGE STAPLES (3/4" WIDE X 1/2" LONG), SPACED EVENLY AT 5 PER POST OR NO. 14 GAGE NAILS (1" LONG WITH 3/4" BUTTON HEAD) SPACED EVENLY AT 4 PER POST.
2. ENDS OF INDIVIDUAL ROLLS OF FABRIC SHALL BE SPLICED TOGETHER ONLY AT A SUPPORT POST WITH A MINIMUM 6" OVERLAP.
3. ECOBERM OR FILTERSOXX IS RECOMMENDED AS A PREFERRED OPTION TO BE USED IN PLACE OF SILT FENCING.

EROSION CONTROL NOTES:

1. THE EROSION AND SEDIMENTATION CONTROL SYSTEMS DEPICTED ON THESE DRAWINGS ARE INTENDED TO BE MINIMUM REQUIREMENTS TO MEET ANTICIPATED SITE CONDITIONS. AS CONSTRUCTION PROGRESSES AND UNEXPECTED OR SEASONAL CONDITIONS DICTATE, THE OWNER SHOULD ANTICIPATE THAT MORE EROSION AND SEDIMENTATION CONTROL FACILITIES WILL BE NECESSARY TO ENSURE COMPLETE SEDIMENTATION CONTROL ON THE PROPOSED SITE. DURING THE COURSE OF CONSTRUCTION, IT SHALL BE THE OBLIGATION AND RESPONSIBILITY OF THE OWNER TO ADDRESS ANY NEW CONDITIONS THAT MAY BE CREATED BY HIS/HER ACTIVITIES AND PROVIDE ADDITIONAL FACILITIES, OVER AND ABOVE MINIMUM REQUIREMENTS, AS REQUIRED BY THE CITY AND AS MAY BE NEEDED TO PROTECT ADJACENT PROPERTIES AND WATER QUALITY OF THE RECEIVING DRAINAGE SYSTEM.
2. EROSION CONTROL DEVICES SHALL BE MAINTAINED IN PLACE UNTIL SITE VEGETATION IS ESTABLISHED.

PRIVATE PROPERTY ASSESSMENT ACT (PPAA) CHECKLIST

PROPERTY DESCRIPTION: Section 9 and 10, T29N, R22W, Flathead County

COMPANY NAME: LHC, Inc., Tutvedt 3 Site

DOES THE PROPOSED AGENCY ACTION HAVE TAKINGS IMPLICATIONS UNDER THE PPAA?

YES	NO	
X		1. Does the action pertain to land or water management or environmental regulation affecting private real property or water rights?
	X	2. Does the action result in either a permanent or indefinite physical occupation of private property?
	X	3. Does the action deprive the owner of all economically viable uses of the property?
	X	4. Does the action deny a fundamental attribute of ownership?
	X	5. Does the action require a property owner to dedicate a portion of property or to grant an easement? (If answer is NO, skip questions 5a and 5b and continue with question 6.)
		5a. Is there a reasonable, specific connection between the government requirement and legitimate state interests?
		5b. Is the government requirement roughly proportional to the impact of the proposed use of the property?
	X	6. Does the action have a severe impact on the value of the property?
	X	7. Does the action damage the property by causing some physical disturbance with respect to the property in excess of that sustained by the public generally? (If the answer is NO, skip questions 7a-7c)
		7a. Is the impact of government action direct, peculiar, and significant?
		7b. Has the government action resulted in the property becoming practically inaccessible, waterlogged, or flooded?
		7c. Has the government action diminished property values by more than 30% and necessitated the physical taking of adjacent property or property across a public way from the property in question?

Taking or damaging implications exist if YES is checked in response to question 1 and also to any one or more of the following questions: 2, 3, 4, 6, 7a, 7b, 7c; or if NO is checked in response to questions 5a or 5b.

If taking or damaging implications exist, the agency must comply with § 5 of the Private Property Assessment Act, to include the preparation of a taking or damaging impact assessment. Normally, the preparation of an impact assessment will require consultation with agency legal staff.